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(54) Title: PURIFIED AND ISOLATED HEPARAN SULFATE 3-O-SULFOTRANSFERASE ISOFORM 5 NUCLEIC ACIDS AND POLYPEPTIDES AND THERAPEUTIC AND SCREENING METHODS USING SAME

atgcattacaaacagcaggcggtggctgagacagaagctctggctgtggaaagccctggcggtggagttctctgtatctatcgccaga 90
 M L F X Q Q A W L R Q K L Y V I G S L A V G S L L Y L V A R 30

 gttgggagttggataggctacaacccatrtgcccattgaaaggtegactgggtggagccgcactcaggctgaaatcccaacttcgcgc 180
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 L Q P K R G L L H B F R K G N S K E Q V R L H D L V Q Q L 90

 ccaaggccattatcatgggttggatggaaaggaggccacaaggccgttgcgttgcataatgcgtaaacctatccggcgtatgc 360
 P K A I I I G V R K G G T R A L L E M L N L H P A V V K A S 120

 caagaaatccactttttgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgc 450
 Q E I H F P D N D E N Y G K I E W Y G K I P F N S Y P Q Q 150

 atcacaatgtaaaaggcccccgcataatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgcgtatgc 540
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 F N Q K F Y Q I T G R T L N M P * 346

WO 2004/005475 A2

(57) Abstract: 3-OST-5 proteins, and nucleic acid molecules encoding the same. Recombinant host cells, recombinant nucleic acids and recombinant proteins are also disclosed, along with methods of producing each. Isolated and purified antibodies to 3-OST-5 homologs, and methods of producing the same, are also disclosed. 3OST-5 gene products have biological activity in specific heparan sulfate 3-O-sulfotransferase reactions. These reactions provide unique modified heparan sulfate. Thus, therapeutic methods involving this activity are also disclosed.



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